

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated April 30, 2008, has been received and its contents carefully reviewed. Applicants appreciate the courtesies extended to Applicants' representatives during the interview conducted on July 16, 2008.

During the interview, the rejections to the claims in the April 30, 2008 Office Action and amendments to the claims were discussed. This response fully incorporates the comments generated during the interview.

By this response, claims 1 and 19 are amended. Support for the amendment can be found in at least Fig. 3 of the drawings. No new matter has been added. Accordingly, claims 1, 3-11, 14-24 are currently pending in the present application, with claims 20 and 21 being withdrawn from consideration. Reexamination and reconsideration of the pending claims are respectfully requested.

Claims 1, 3-11, 14-19, and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,129,804 to Gaynes et al. (hereinafter "Gaynes") in view of Japanese Laid Open Patent Application Publication No. 2001-356353 to Satoshi (hereinafter "Satoshi") and U.S. Patent No. 5,263,888 to Ishihara (hereinafter "Ishihara") and U.S. Patent No. 5,961,777 to Kakinuma (hereinafter "Kakinuma"). Claims 1, 3-11, 14-19 and 22-23 are rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent Application Publication No. 2002/0062787 A1 to Hashizume et al. (hereinafter "Hashizume") in view of Ishihara and (optionally) Satoshi.

The rejection of claims 1, 3-11, 14-19, and 24 under 35 U.S.C. §103(a) as being unpatentable over Gaynes, in view of Satoshi, Ishihara and Kakinuma is respectfully traversed and reconsideration is requested.

Independent claim 1 recites an apparatus for manufacturing liquid crystal display devices having a combination of features including, "at least one substrate bonding station for bonding a first substrate having a sealant thereon to a second substrate having a liquid crystal thereon, wherein the substrate bonding station includes first and second sides" and "wherein the at least one substrate bonding station includes upper and lower chamber units each having a flat surface facing each other and each having a sealing surface extending along the flat surface and supported by the flat surface, and the sealing member is provided on the sealing surface of the at

least one of the of the upper and lower chamber units.” Applicants submit that the cited references including

In rejecting claim 1, the Examiner cites Gaynes as disclosing “at least on bonding station (items 33 and 37) for bonding unbonded first and second substrates.” Office Action at page 3, lines 1-5. Applicants respectfully disagree with the Examiner’s statement regarding the disclosure of Gaynes.

Gaynes discloses an apparatus for aligning an attaching together a plurality of thin film transistor tiles for a display. Gaynes Abstract. Gaynes discloses that the transistor tiles each “represent an individual flat panel LCD display.” Gaynes at column 8, lines 32-33. Accordingly, Gaynes does not disclose at least one substrate bonding station for bonding a first substrate having a sealant thereon to a second substrate having a liquid crystal thereon” as recited in claim 1.

In the Office Action, the Examiner admits that Gaynes does not disclose “a sealing member wherein the sealing member thickness is set according to a pressure applied to the first and second glass substrates.” The Examiner relies on Satoshi as curing this deficiency in the teachings of Gaynes, in particular citing paragraph 16 and 17 of the translation of Satoshi as disclosing an O-ring. The Office Action states that Satoshi’s bonding station includes upper and lower chamber units each having a flat surface facing each other and the sealing member is provided on the at least one of the upper and lower chamber units.”

Applicants submit that assuming for argument that the Examiner is correct concerning the teaching of Satoshi, that Satoshi, alone, or in combination with Ishihara and Kakinuma does not the deficiencies in the teachings of Gaynes.

Regarding the O-ring mentioned above, paragraph 15 of the translation of Satoshi states “the flange of the upper chamber 21 contacts and is united in the O-ring 44 arranged around the bottom chamber 10.” Applicants submit that Satoshi is silent about “a sealing surface extending along the flat surface and supported by the flat surface” and “the sealing member is provided on the sealing surface of the at least one of the of the upper and lower chamber units” as recited in claim 1.

Further, neither Ishihara nor Kakinuma cure the deficiency in the teachings of Gaynes and Satoshi regarding the combined features recited in claim 1. Ishihara is cited by the Examiner

as purportedly disclosing applying sealant to a first substrate and liquid crystal to a second substrate. Kakinuma is cited by the Office as purportedly disclosing “multiple, parallel loading and unloading structures.” Ishihara and Kakinuma are silent regarding “wherein the at least one substrate bonding station includes upper and lower chamber units each having a flat surface facing each other and each having a sealing surface extending along the flat surface and supported by the flat surface, and the sealing member is provided on the sealing surface of the at least one of the of the upper and lower chamber units” as recited in claim 1. Applicants submit that for at least this reason, Gaynes, Ishihara, Kakinuma and Satoshi, analyzed singly or in any combination do not teach or suggest the combined features of claim 1.

Additionally, as discussed during the interview, Gaynes does not disclose bonding a first substrate to a second substrate with liquid crystal between the substrates because Gaynes discloses an invention for joining assembled panels into a large LCD display. Accordingly, there would be no reason to modify the invention of Gaynes to include “the sealing member seals an interior space surrounding the upper and lower stages and, wherein the sealed interior space is definable by joined ones of the upper and lower chamber units.”

Accordingly, Applicants submit that Gaynes, Ishihara, Kakinuma and Satoshi, analyzed singly or in any combination do not teach or suggest at least “wherein the at least one substrate bonding station includes upper and lower chamber units each having a flat surface facing each other and each having a sealing surface extending along the flat surface and supported by the flat surface, and the sealing member is provided on the sealing surface of the at least one of the of the upper and lower chamber unit” and that claim 1 is allowable over Gaynes, Ishihara, Kakinuma and Satoshi for at least this additional reason.

Claims 3-11, 14-19, and 24 depend directly or indirectly from claim 1 and include by reference all of the limitations of claim 1. Accordingly, Applicants submit that claims 3-11, 14-19, and 24 are allowable Gaynes, Ishihara, Kakinuma and Satoshi for at least the reasons given for claim 1 above.

The rejection of claims 1, 3-11, 14-19 and 22-24 under 35 U.S.C. §103(a) as obvious over Hashizume in view of Ishihara and (optionally) Satoshi is respectfully traversed and reconsideration is requested.

Independent claim 1 recites an apparatus for manufacturing liquid crystal display devices having a combination of features including, “wherein the at least one substrate bonding station includes upper and lower chamber units each having a flat surface facing each other and each having a sealing surface extending along the flat surface and supported by the flat surface, and the sealing member is provided on the sealing surface of the at least one of the of the upper and lower chamber units.”

The Examiner states that Hashizume discloses a sealing member using an O-ring, in particular citing paragraphs 276 and 281-284 of Hashizume. Applicants submit that even assuming for the sake of argument that the Examiner is correct concerning the disclosure of Hashizume, Hashizume is silent regarding “a sealing surface extending along the flat surface and supported by the flat surface” or “the sealing member is provided on the sealing surface of the at least one of the of the upper and lower chamber units” as recited in claim 1.

Further, as discussed above regarding the rejection based on Gaynes, Ishihara and Satoshi do not cure this deficiency. Accordingly, Applicants submit that Ishihara, Hashizume, and Satoshi, analyzed singly or in any combination do not teach or suggest the combined features recited in claim 1. Accordingly, Applicants submit that claim 1 and claims 3-11, 14-19 and 22-24 depending from claim 1 are allowable over the cited references.

Claim 19 additionally recites “wherein the sealing member seals an interior space surrounding the first and second substrates, wherein the sealed interior space is definable by joined ones of the upper and lower chamber units and the sealing surfaces of the upper and lower chamber units.” Applicants submit that the cited references, analyzed singly or in combination do not teach at least this combination of features recited by claim 19, and that claim 19 is allowable over Hashizume, Gaynes, Ishihara, Kakinuma and Satoshi for at least this additional reason.

Applicants believe the application is in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911.

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Respectfully submitted,

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